

ABSTRACT OF THE DISCLOSURE

A low coherent reflectometer uses low coherent beams for measurement of reflectance and reflecting positions with respect to a measured optical circuit which includes a reflecting point. The low coherent beams are branched to produce measurement beams (DL) and local beams (KL), so that the measurement beams are introduced into a first optical path, which includes a dispersion shifted fiber, towards the measured optical circuit, while the local beams are introduced into a second optical path which includes a spatial optical path terminated by a reflecting mirror. Reflected measurement beams (RL) and reflected local beams are combined together to produce combined beams, which are subjected to processing and analysis. The spatial resolution is noticeably improved even though the spatial optical path length is varied because the length of the dispersion shifted fiber is determined to substantially match the spatial optical path length.